# (19) World Intellectual Property Organization

International Bureau



### 

### (43) International Publication Date 29 April 2004 (29.04.2004)

**PCT** 

## (10) International Publication Number WO 2004/035290 A1

(51) International Patent Classification7:

B29C 45/17

(21) International Application Number:

PCT/CA2003/001582

(22) International Filing Date: 17 October 2003 (17.10.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 2,408,813

18 October 2002 (18.10.2002) CA

(71) Applicant (for all designated States except US): TOP GRADE MOLDS LTD. [CA/CA]; 929 Pantera Drive, Mississauga, Ontario LAW 2R9 (CA).

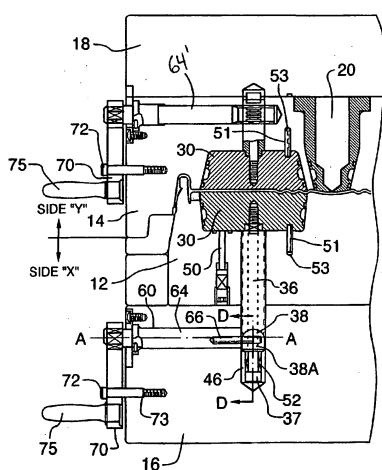
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): CICCONE, Vince

[CA/CA]; 118 Rushworth Crescent, Kleinburg, Ontario LOJ 1C0 (CA). MARAN, Petrica [CA/CA]; 765 Clemens Cres, Mississauga, Ontario L5V 2S9 (CA).

- (74) Agent: RIDOUT & MAYBEE LLP; One Queen Street East, Suite 2400, Toronto, Ontario M5C 3B1 (CA).
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

[Continued on next page]

(54) Title: INTERCHANGEABLE MOLD INSERT SYSTEM



(57) Abstract: An insert system for an injection mold apparatus is provided. The mold has a mold cavity plate (14) and a mold core plate (12) each secured to mold bases (16, 18), relatively movable between open and closed positions, each having opposing faces, the faces meeting to define a mold cavity between the two faces. At least one of the mold plate faces defines a facial pocket (40) therein for insertion of a mold insert (30). The mold insert is secured to an insert rod (36). The mold plate having the facial pocket (40) defines a passageway (46) extending from the facial pocket through the plate (12) and mold base (16). The insert rod is insertable into the passageway to a position where the insert sits within said facial pocket at a prelock position, where said insert is only partially inserted into said facial pocket. Preferably the insert is biased in this prelock position. Locking means (64, 66, 38, 70, 74, 76, 101, 63A, 63B) is operably connected to the insert rod (36), operable from the periphery of said mold base, to releasably lock the insert rod within said passage and thus the insert from said prelock position to a fully inserted position where the insert sits flush with the mold plate face.

WO 2004/035290

#### WO 2004/035290 A1

SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.